

Patent Claims

1. Method for the establishment of a virtual electronic teaching system, utilizing a telecommunication network with a main distribution connected to an exchange, with an access multiplexer and/or splitter connected to or integrated in the main distribution, and with analog or digital telecommunication devices (TE), with a provided interface circuit (SS) connectable to the telecommunication device (TE), which, on one end, is connected to the main distribution via a subscriber line or subscriber modem and splitter or a network termination (NTBA) and subscriber lines (AL), and, on the other end, to a workstation (AP) of the person participating in an e-learning or tele-teaching event, the inventive method comprises the following steps:
 - after establishment of the connection, the type of connection pending on the interface circuit (SS) is first determined from the transmitter side,
 - then, a stored test signal is transmitted to the remote station, and
 - an acknowledgement returned in the return direction by the remote station is evaluated,whereby the bandwidth available to the telecommunication device (TE) is tested.
2. Method according to claim 1, **characterized in** that the interface circuit (SS) tests all available protocols in communication with the remote station and adjust itself to the protocol proposed from the remote station.

3. Method according to claim 1, **characterized in** that, in order to avoid „time out“ problems, the interface circuit (SS) emits a message confirming the complete reception of, for example, an image file, so that the workstation (AP) remains in the tele-teaching or e-Learning event, even though a broadband transmission is not possible.
4. Method according to claim 1, **characterized in** that an access authorization is stored in the interface circuit (SS), thereby securing the establishment of the connection and the test process against unauthorized access and by recording the procedure.
5. A virtual electronic teaching system, established with utilization of a telecommunication network, comprising a main distribution connected to an exchange (VST), an access multiplexer and/or splitter connected to or integrated in the main distribution, as well as analog or digital telecommunication devices (TE), which comprises:

an interface circuit (SS) connectable to the telecommunication device (TE), which, on one end, is connected to the main distribution via a subscriber line or subscriber modem and splitter or a network termination (NTBA) and subscriber lines (AL), and, on the other end, to a workstation (AP) of the person participating in an e-Learning or tele-teaching event, and which tests the bandwidth available at the telecommunication device (TE).

6. Device according to claim 5, **characterized in** that the interface circuit (SS) comprises a microprocessor (MP), a read-only memory (SP) and/or a hard disk, as well as at least one of each plug-type connectors (COM, USB) for the connection of the telecommunication device (TE) and the workstation (AP).
7. Device according to claim 6, **characterized in** that the read-only memory (SP) is exchangeable.
8. Device according to claim 5, **characterized in** that an intelligent operating element (BT) is connected to the interface circuit (SS).
9. Device according to claim 5, **characterized in** that the interface circuit (SS) is designed as a plug-in card for a network station or a PC.
10. Device according to claim 9, **characterized in** that the plug-in card comprises at least one microprocessor (MP) and a LAN interface designed as bus interface and that the LAN interface is connected to the PCI bus that transmits control information, with the network station or the PC as host system.
11. Device according to claim 9, **characterized in** that upon plugging-in of the plug-in card in the host system, it is detected as a LAN card by the plug and play function or by standard drivers.
12. Device according to claim 9, **characterized in** that the plug-in card comprises a call number memory with the number of participants

and/or network stations authorized to access data and that, depending on the transmitted call number, the call number is verified and /or the connection is established to the authorized caller.

13. Device according to claim 9, **characterized in** that the plug-in card automatically breaks the connection in case of a pause in the transmission lasting longer than a preselected waiting time, and restores the connection when data are once again pending.
14. Device according to claim 9, **characterized in** that, depending on the bandwidth demand, the plug-in card automatically activates additional communication channels, by means of which a dynamic channel management and bandwidth control is achieved.